Elke Environmental, Inc.

P.O. Box 14167 Odessa, TX 79768 Phone (432) 366-0043 Fax (432) 366-0884

March 13, 2009

New Mexico Oil Conservation Division Mr. Larry Johnson 1625 N French Drive Hobbs, New Mexico 88240

> Re: Remediation Plan for Oxy USA – Todd Lower San Andres #8 Leak UL 'H' Sec. 35 T7S R35E Roosevelt County 1RP-2029 2.152

Mr. Larry Johnson,

Elke Environmental was contracted by Oxy USA to complete the remediation of the impacted soil at the Todd Lower San Andres #8 Flowline Leak. Vertical and horizontal delineation of the site was started with a backhoe and completed using an air rotary rig. The ranking criteria for this site is as follows: Surface Body of Water -0 points; Wellhead Protection Area -0 points; Groundwater Depth -0 points (GW = 109'). The total ranking for the site is 0 points. Attached is a plat map, driller's logs, field analytical and lab confirmation for the site.

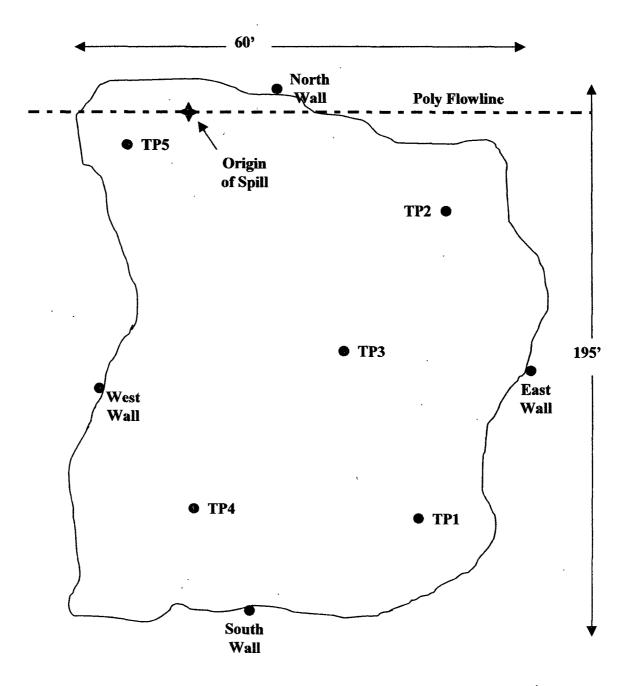
A monitor well was set at the site to prove groundwater conditions. During the drilling of the borehole no signs of a water bearing zone were present. The borehole was left open for 72 hrs and an interface probe was used to show groundwater at 126' bgs. Seven days after the borehole was drilled a monitor well was set. The initial borehole was drilled to 150' bgs, after 7 days the borehole collapsed and Total Depth was 114' bgs. After setting the monitor well a groundwater reading was taken a 112' bgs. During the development, the well dried up. A water reading was taken every 15 minutes until an estimated yield was determined. The estimated yield was determined to be 0.4 Gallons per Day. The groundwater was sampled for TDS and returned a result of 516 mg/L. NMAC 19.15.1.19, Section B, Subsection 2 states "Ground-water pollution at any place of withdrawal for present or reasonably foreseeable future use, where the TDS concentration is 10,000 mg/L or less, shall be abated". With only 0.4 GPD recharge rate, Oxy USA feels that the yield from that water zone is to low for any foreseeable future use and proposes the following remediation plan.

Oxy USA proposes to excavate 4' of impacted soil and haul to Gandy Marley Disposal. A 20 mil poly liner will be installed at 4' bgs with 4 oz geo-textile liner above and below the poly liner. 4' of clean native soil will be backfilled and contoured to the surrounding area. The site will be re-seeded with a mixture approved by the landowner. A final report will be submitted at the completion of the remediation. If you have any questions about the enclosed report please contact me at the office.

Sincerely.

Logan Anderson

Oxy USA Todd Lower San Andres #8 Flowline Leak UL 'H' Sec. 35 T7S R35E Roosevelt County, NM



Plat Map

Elke Environmental, Inc. P.O. Box 14167 Odessa, TX 79768

Field Analytical Report Form

Client Oxy USA

Analyst _____ Curtis Elam/Logan Anderson

Site Todd Lower San Andres #8 Flowline Leak

Sample ID	Date	Depth	TPH / PPM	CI / PPM	PID / PPM	GPS
TP1	12-24-08	Surface	60,800	993		33° 40.272' N
111	12-24-00	Surface	00,000	<i>333</i>		<u>103° 18.826' W</u>
TP1	12-24-08	2'	30,400	2,038		33° 40.272' N
				2,000		103° 18.826' W
TP1	1-19-09	3'	1,490	2,350		33° 40.272' N
			_,			103° 18.826' W
TP1	1-19-09	5'	67	894		33° 40.272' N
				<u>103° 18.826' W</u>		
TP1	1-19-09	7'	[823		33° 40.272' N
					103° 18.826' W	
TP1	1-20-09	9'		732		33° 40.272' N 103° 18.826' W
				·		<u> </u>
TP1	1-20-09	12'	33	657		103° 18.826' W
······						<u>33° 40.272' N</u>
TP1	2-10-09	15'		2,149		103° 18.826' W
					· · · · · · · · · · · · · · · · · · ·	<u>33° 40.272' N</u>
TP1	2-10-09	20'		259		103° 18.826' W
						33° 40.272' N
TP1	2-10-09	25'		139	0.0	103° 18.826' W
TDO	10.04.00	0.0	50.000	1 700		33° 40.284' N
TP2	12-24-08	Surface	50,900	1,780		103° 18.812' W
TP2	12-24-08	2'	23,800	1,591		33° 40.284' N
1172	12-24-08	2	25,800	1,391		103° 18.812' W
TP2	1-19-09	3'	3,830	6,235		33° 40.284' N
	1 19-09		5,050	0,255		103° 18.812' W
TP2	1-19-09	5'	45	7,105		33° 40.284' N
				7,105		<u>103° 18.812' W</u>
TP2	1-19-09	7'		6,821		33° 40.284' N
			 			103° 18.812' W
TP2	1-20-09	9'		7,651		33° 40.284' N
		<u> </u>		<u> </u>	·	<u>103° 18.812' W</u>
TP2	1-20-09	12'	56	7,824		33° 40.284' N
L	··	I	L		I	103° 18.812' W

Analyst Notes

Elke Environmental, Inc. P.O. Box 14167 Odessa, TX 79768

Field Analytical Report Form

Client Oxy USA Analyst Curtis Elam/Logan Anderson

Site Todd Lower San Andres #8 Flowline Leak

Sample ID	Date	Depth	TPH / PPM	Cl/PPM	PID / PPM	GPS
TP2	2-10-09	15'		1,965		33° 40.284' N
1172	2-10-09	15		1,905		103° 18.812' W
TP2	2-10-09	20'		4,220		33° 40.284' N
	2-10-09	20		4,220		103° 18.812' W
TP2	2-10-09	25'		4,752		33° 40.284' N
	2 10-05			7,752		103° 18.812' W
TP2	2-10-09	30'		3,959		33° 40.284' N
				5,555		<u>103° 18.812' W</u>
TP2	2-10-09	35'	ł	3,457	}	33° 40.284' N
						<u>103° 18.812' W</u>
TP2	2-10-09	40'		2,762		33° 40.284' N
		ļ				<u>103° 18.812' W</u>
TP2	2-10-09	45'		3,306		33° 40.284' N
		L		-,		<u>103° 18.812' W</u>
TP2	2-10-09	50'		4,021	1	33° 40.284' N
			· · · · · · · · · · · · · · · · · · ·			<u>103° 18.812' W</u>
TP2	2-10-09	55'		5,359		33° 40.284' N
· · · · · · · · · · · · · · · · · · ·				- ,		<u>103° 18.812' W</u>
TP2	2-10-09	60'		1,750		33° 40.284' N
						103° 18.812' W
TP2	2-10-09	65'	ł	282		33° 40.284' N
·		<u> </u>				<u>103° 18.812' W</u>
TP2	2-10-09	70'		160	0.0	33° 40.284' N
				┠		<u>103° 18.812' W</u>
TP3	12-24-08	Surface	55,100	866		33° 40.283' N
		 				<u>103° 18.817' W</u>
TP3	12-24-08	2'	27,700	1,284		33° 40.283' N
······································		<u> </u>		<u> </u>		<u>103° 18.817' W</u>
TP3	1-19-09	3'	4,880	7,811		33° 40.283' N 103° 18.817' W
		<u> </u>		<u> </u>		<u> </u>
TP3	1-19-09	5'	89	7,701		103° 18.817' W
			<u> </u>	<u> </u>		<u>33° 40.283' N</u>
TP3	1-19-09	7'		7,535		1
L		L	L		L	<u>103° 18.817' W</u>

Analyst Notes

Elke Environmental, Inc.

P.O. Box 14167 Odessa, TX 79768

Field Analytical Report Form

Client_Oxy USA

Analyst Curtis Elam/Logan Anderson

.

Site Todd Lower San Andres #8 Flowline Leak

Sample ID	Date	Depth	TPH / PPM	CI / PPM	PID / PPM	GPS
TP3	1-19-09	9'		7,202		33° 40.283' N
11.5	1-17-07			7,202		103° 18.817' W
TP3	1-19-09	12'	77	6,881		33° 40.283' N
					······	103° 18.817' W
TP3	2-10-09	15'		2,752		33° 40.283' N
						<u>103° 18.817' W</u>
TP3	2-10-09	20'		2,742		33° 40.283' N
						<u>103° 18.817' W</u> 33° 40.283' N
TP3	2-10-09	25'		921		
				100		<u>103° 18.817' W</u> 33° 40.283' N
TP3	2-10-09	30'		183		53 40.283 N 103º 18.817' W
				33° 40.283' N		
TP3	2-10-09	35'		196	0.0	103° 18.817' W
					33° 40.281' N	
TP4	12-24-08	Surface	29,870	577		103° 18.826' W
						<u>33° 40.281' N</u>
TP4	12-24-08	2'	11,520	1,692		103° 18.826' W
			- 100			33° 40.281' N
TP4	1-19-09	3'	2,100	4,320		103° 18.826' W
	1 10 00			1 0 00		33° 40.281' N
TP4	1-19-09	5'	71	1,382		103° 18.826' W
TD4	1 10 00	7'		0.451		33° 40.281' N
TP4	1-19-09	/		2,451		103° 18.826' W
TP4	1-20-09	9'		1,821		33° 40.281' N
	1-20-03	,		1,021		103° 18.826' W
TP4	1-20-09	12'	66	1,299		33° 40.281' N
	1-20-07	12		1,277		103° 18.826' W
TP4	2-10-09	15'		1,454		33° 40.281' N
				1,434		103° 18.826' W
TP4	2-10-09	20'		104	ļ	33° 40.281' N
·					 	<u>103° 18.826' W</u>
TP4	2-10-09	25'		196	0.0	33° 40.281' N
L		L	L			103° 18.826' W

Analyst Notes_

Elke Environmental, Inc. P.O. Box 14167 Odessa, TX 79768

Field Analytical Report Form

Client_Oxy USA

Analyst ____ Curtis Elam/Logan Anderson

Site _____ Todd Lower San Andres #8 Flowline Leak

Sample ID	Date	Depth	TPH / PPM	CI/PPM	PID / PPM	GPS
TP5	12-24-08	Surface	61,400	1,311		33° 40.292' N
115	12-24-00	Surface	01,400	1,311		103° 18.809' W
TP5	12-24-08	2'	37,600	2,151		33° 40.292' N
11.5	12 21 00				L	<u>103° 18.809' W</u>
TP5	1-20-09	3'	5,600	7,851		33° 40.292' N
						<u>103° 18.809' W</u>
TP5	1-20-09	5'	470	8,390		33° 40.292' N
						<u>103° 18.809' W</u>
TP5	1-20-09	7'	70	8,233		33° 40.292' N
	_ <u></u>	<u> </u>				<u>103° 18.809' W</u> 33° 40.292' N
TP5	1-20-09	9'		8,271		33 40.292 N 103º 18.809' W
		<u> </u>	<u>}</u>		┨─────┤	<u> </u>
TP5	1-20-09	12'	79	8,638		103° 18.809' W
<u></u>				<u> </u>		<u>33° 40.292' N</u>
TP5	2-11-09	15'		5,915		103° 18.809' W
			.			33° 40.292' N
TP5	2-11-09	20'		4,776		103° 18.809' W
	0.11.00	262	· · · · · · · · · · · · · · · · · · ·	5.640	1	33° 40.292' N
TP5	2-11-09	25'		5,642		103° 18.809' W
TP5	2-11-09	30'		4.590		33° 40.292' N
IFJ	2-11-09	50		4,580		103° 18.809' W
TP5	2-11-09	35'		4,224		33° 40.292' N
11.5	2-11-09	55		4,224		103° 18.809' W
TP5	2-11-09	40'		3,588		33° 40.292' N
	2 11 05	L	<u> </u>	5,500		<u>103° 18.809' W</u>
TP5	2-11-09	45'		4,395		33° 40.292' N
			· · · · · · · · · · · · · · · · · · ·			<u>103° 18.809' W</u>
TP5	2-11-09	50'		5,234	(I	33° 40.292' N
			<u> </u>			103° 18.809' W
TP5	2-11-09	55'		1,955		33° 40.292' N
				<u> </u>		<u>103° 18.809' W</u>
TP5	2-11-09	60'	}	1,130		33° 40.292' N
L		L <u></u>	L	1	Ll	103° 18.809' W

Analyst Notes

Elke Environmental, Inc. P.O. Box 14167 Odessa, TX 79768

Field Analytical Report Form

Client Oxy USA Analyst Curtis Elam/Logan Anderson

Site Todd Lower San Andres #8 Flowline Leak

Sample ID	Date	Depth	TPH / PPM	Cl/PPM	PID / PPM	GPS
TP5	2-11-09	65'		212		33° 40.292' N
						103° 18.809' W
TP5	2-11-09	70'		204	0.0	33° 40.292' N
					·	<u>103° 18.809' W</u>
Background	1-20-09	Surface	27	123		33° 40.290' N
	<u></u>		· · · · · · · · · · · · · · · · · · ·			<u>103° 18.816' W</u>
Background	1-20-09	5'	56	138		33° 40.290' N
						<u>103° 18.816' W</u>
Background	1-20-09	9'	38	146		33° 40.290' N
						103° 18.816' W
North Wall	1-20-09	2'	57	171	ļ	33° 40.293' N
······································						<u>103° 18.801' W</u>
North Wall	1-20-09	5'	66	139		33° 40.293' N
						<u>103° 18.801' W</u>
South Wall	1-20-09	2'	36	154		33° 40.272' N
						<u>103° 18.820' W</u>
South Wall	1-20-09	5'	78	126		33° 40.272' N
						<u>103° 18.820' W</u>
East Wall	1-20-09	2'	37	127		33° 40.292' N
						<u>103° 18.809' W</u>
East Wall	1-20-09	5'	59	147		33° 40.292' N
						<u>103° 18.809' W</u>
West Wall	1-20-09	2'	34	134		33° 40.290' N
	120 05	<u> </u>		154		<u>103° 18.826' W</u>
West Wall	1-20-09	5'	28	168		33° 40.290' N
	1 20 07		20	100		103° 18.826' W
	<u> </u>			ļ	[
		_				
			1			
	<u> </u>	ļ				
				1		
L	L			<u> </u>		

Analyst Notes

Elke Environmental, Inc.

P.O. Box 14167 Odessa, TX 79768

Monitor Well Report Form

Client Oxy USA

Date <u>3-10-2009</u>

Site _____ Todd Lower San Andres #8

Monitor Well ID	Depth of Water	Total Depth of Well	Feet of Water	Gallons of Water to Purge	Gallons of Water Purged	Time
MW - 1	109.03'	116.21'	7.18'	3.5	1.25	12:43 pm
				· · · · · · · · · · · · · · · · · · ·		
	+					
	<u> </u>					
		<u> </u>				

Notes _____ During 3 well volume purge, monitor well showed signs of becoming dry. Sample was taken due

To decreasing volume of water in monitor well.



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

	POD NUMBE	•	•				OSE FILE NUM	BER(S)		·		
GENERAL AND WELL LOCATION			AN ANDRE	S #8 MW-1	PAGE	1 OF 2						
TA	WELL OWNE						PHONE (OPTIO	NAL)				
Š	OXY US/	-										
E	WELL OWNE		ADDRESS								73P	
ME	P.O. BO	K 1988					CARLSBAD NM 882			221		
2	WELL			DEGREES	MINUTES SEC	ONDS						
TA	LOCATIO		TUDE	33	40	15.00 N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND					
ERA	(FROM OP	⁽⁸⁾	NGITUDE	103	18	43.00 W	* DATUM REQ	WIRED: WGS 84				
I	DESCRIPTIO			ON TO STREET ADDRE	SS AND COMMON LAN	MARKS	L					
91	MILNESAND GO N ON 206 TURN R GO'E FOR 1.5 MI TURN R AGAIN S FOR 2THS MILE - ROOSEVELT CO, NM											
	(2.5 ACR)	E)	(10 ACRE)	(47 ACRE)	(160 ACRE)	SECTION		TOWNSHIP		RANGE	DEAST	
Ţ	14		*/4	%	1/4				SOUTH		WEST	
Ñ	SUBDIVISION NAME LOT NU							BLOCK NUMBER		UNIT/TRA	. T	
OPTIONAL												
2.0	HYDROGRA	PHIC SURV	ΈY			MAPNUMBER		TRACT NU	MBER			
	LICENSE NUMBER NAME OF LICENSED DRILLER							NAME OF WELL DE	ILLING CO	MPANY		
	WD1478 EDWARD BRYAN							STRAUB COP	RPORA	TION		
	DRILLING	TARTED	DRILLING EN	DED DEPTH OF COM	IPLETED WELL (FT)	BORE HO	LE DEPTH (FT)	DEPTH WATER PIR	ST ENCOUR	TERED (FT)		
Z	2-2	5-09	2-25-0	9	114		150	_				
Ĕ							STATIC WATER LE	VEL IN CON	PLETED WE	LL (FT)		
M	COMPLETED WELL IS: ARTESIAN DRY HOLE SHALLOW (UNCONFINED)							N/A				
Q	DRILLING	FLUID:	AIR	MUD	ADDITIVES -							
DRILLING INFORMATION	DBILLING	METHOD:	ROTARY	HAMMER	CABLE TOOL	[] oth	ER - SPECIFY:					
E	DEPT	H (FT)	BORE HO	LE	CASING	CON	NECTION	INSIDE DIA.	CASIN	G WALL	SLOT	
DRI	FROM	то	DIA. (IN) M	ATERIAL	TYPI	E(CASING)	CASING (IN)	THICK	NESS (IN)	SLZE(IN)	
.	114	94	5		VC .010 SCREEN		FJ	2		.154	0.10	
	94	+43	5	SCH 4	0 PVC RISER	_	FJ	2	0	.154	RISER	
								L	ļ			
		L	1						<u> </u>		L	
	DEPT	H (FT)	THICKNE	ISS I	FORMATION DESCI	IPTION OF	PRINCIPAL W	ATER-BEARING S	TRATA		YIELD	
E	FROM	TÔ	(FT)		(INCLUDE WAT	ER-BEARIN	G CAVITIES O	DR FRACTURE ZON	IES)		(GPM)	
LIRA												
CS	FROM TO (FT) (INCLUDE WATER-BEARIN									`		
								,				
3EA	L											
ERI	L			1								
ATS	METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA TOTAL ESTIMATED WELL YIELD (GPM)											
4 W												
<u> </u>		<u></u>										

FOR OSE INTERNAL USE		WELL RECORD & LOG	(Version 6/9/08)
FILE NUMBER	POD NUMBER	TRN NUMBER	
LOCATION		· · · ·	PAGE 1 OF 2

e	TYPE OF PUMP:		U SUBMER		☐ JET ☐ CYLINDER	NO PUMP – WELL NOT EQUIPPED OTHER – SPECIFY:						
AND PUMP			DEPTH	(FT)	BORE HOLE	MATERIAL TYPE AND SIZE	AMOUNT	METHO				
FN	ANNU SEAL		FROM 114	 	DIA. (IN) 5	6 BAGS 20/40 SAND	(CUBIC FT)	TOPL				
SEAL	GRAVE		81	2	5	16 BAGS OF 3/8 PLUG		TOPL				
vi			0	2	5	.5 BAGS OF CEMENT		TOPLOAD				
	DEPTI	I (FT)	THICK			COLOR AND TYPE OF MATERIAL ENCOUNTERED						
	FROM	TO	(F		(INCL	UDE WATER-BEARING CAVITIES OR FRACT	URE ZONES)	BEAR				
	0	1	1		_	TAN FINE SAND - CALICHE						
	1	3	2		ļ	REDDISH TAN FINE SAND - CALIC		T YES				
	3	9	6	i	c	CALICHE - TAN FINE SAND - SANDS	TONE	D YES	Ø N			
	8	11	2	2		CALICHE SANDSTONE - TAN SA	ND	U YES	Ø N			
н	11	26	1	5	CA	LICHE - TAN SANDSTONE - TAN FI	NE SAND	□ YES	1 N			
WEI	26	33	7	,		TAN FINE SAND - SANDSTON	E	T YES	ØN			
50	33	39	1	3		TAN FINE SAND		YES	M 🖸			
ð	39	47	8	3		TAN FINE SAND - GRAVEL		U YES				
ICI	47	51		Ļ		TAN FINE SAND - SANDSTONE (C	MT)	VES				
ğ	51	64	1	3		TAN FINE SAND SANDSTONE		U YES				
GEOLOGIC LOG OF WELL	64	76	1	2	Т	AN FINE - VERY FINE SAND - SAND	STONE	U YES				
ۍ کې	76	79		3		DARK TAN FNE SAND - WITH TAN	CLAY	O YES	2 N			
	79	89	1	0		TAN SILTY CLAY TAN VERY FINE	SAND	T YES	Ð			
	89	93		4		DARK GRAY CLAY						
	93	96	ŧ	3	GOL	TYES	יז 🖸					
	96	103		7		TAN VERY FINE SAND						
	103	107		4		TAN WHITE FINE SAND (BEIG	É)	🛛 YES				
		ATTACH ADDITIONAL PAGES AS NEEDED TO FULLY DESCRIBE THE GEOLOGIC LOG OF THE WELL										
0			METHOD:	🗌 BAIL	ER 🖸 FUMP	AIR LIFT OTHER - SPECIFY:	· · · · · · · · · · · · · · · · · · ·					
L INF	WEL	L TEST				DATA COLLECTED DURING WELL TESTING AND DRAWDOWN OVER THE TESTING PER		IME, END	пме,			
7, TEST & ADDITIONAL INFO		ADDITIONAL STATEMENTS OR EXPLANATIONS: 2X2 PAD - 4X4 HIGH RISER - WELL CAVED IN AT 114 FT TO 150 FT										
SIGNATURE	THEID	THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:										
5												

FOR OSE INTERNAL USE	WELL RECORD & LOG (Version 6/9/08)		
FILE NUMBER	POD NUMBER	TRN NUMBER	
LOCATION			PAGE 2 OF 2

,



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

	POD NUMBE	•	-				OSE FILE NUM	BER(S)				
NO			SAN ANDRE	ES #8 MW-1	PAGE	2 OF 2						
GENERAL AND WELL LOCATION	WELL OWNE	•	0				PHONE (OPTIO	NAL)				
TT	WELL OWNE	RMAILIN	G ADDRESS				CITY		STATE		Z1P	
WEI	P.O. BO)	< 198 8					CARLSBA	D	NM	882	221	
R	WELL	- T		DEGREES	MINUTES SECON	NOS						
A.L.	LOCATIO	NL	TTTUDE	. 33	40 15	5.00 N	• ACCURACY	ACCURACY REQUIRED: ONE TENTH OF A SECOND				
ER	(PROM GPS)		NOLTUDE	103	18 43	3.00 W	* DATUM REQ	UIRED: WOS 84				
CEN	DESCRIPTION BELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS MILNESAND GO N ON 206 TURN R GO E FOR 1.5 MI TURN R AGAIN S FOR 2THS MILE. ROOSEVELT CO, NM											
							IN S FOR 2		JUSEVI			
	(2,5 ACR)	8)	(16 ACRE)	(40 ACRE)	(160 ACRE)	SECTION		TOWNSHIP	NCBET 23	RANGE	🗹 FAST	
IAL	4			1/4	. 14						Wist	
OPTIONAL	SUBDIVISIO	IN NAME			LOT NUR	ABER	BLOCK NUMBER		UNIT/TRAC	LT		
10	HYDROGRAPHIC SURVEY							MAPNUMBER		TRACT NU	MBER	
	LICENSE N	TA (PEP	NAMEORIE	ENSED DRILLER				NAME OF WELL OR		484335		
•	WD1478 EDWARD BRYAN							STRAUB COF				
	DRILLING	-	DRILLING PN		PLETED WELL (FT)	BOREHO	LE DEPTH (FT)	DEPTH WATER FIR				
z	2-25-09 2-25-09			9	114							
DRILLING INFORMATION	COMPLETED WELL IS: ARTERIAN DRY HOLE SHALLOW (UNCONFINED)							STATIC WATER LET	VEL IN COM		LL(FT)	
PORM	DRILLING		AIR		ADDITIVES - SPE			l		`	<u> </u>	
le in	DRILLING		ROTARY		CABLE TOOL		BR - SPECIFY:					
3	DEPT	H (FT)	BORE HC	LE	CASING		NECTION	INSIDE DIA.	CASIN	G WALL	SLOT	
DRI	FROM	TO	DIA. (IN	D N	ATERIAL	TYPE	E (CASING)	CASING (IN)	THICK	NESS (IN)	SIZE (IN)	
6	114	94	5		VC .010 SCREEN		FJ	2	0	.154	0.10	
	94	+43	5	SCH 4	40 PVC RISER		FJ	2	0	.154	RISER	
	· · ·								<u> </u>		<u> </u>	
	DEPT	H (FJ)	THICKNI	ESS	FORMATION DESCRIP	PTION OF	PRINCIPAL W	ATER-BEARING S	TRATA		YIELD	
A A	FROM	το	(FT)		(INCLUDE WATER	-BEARIN	G CAVITIES O	R FRACTURE ZON	NES)		(GPM)	
TRA	107	103	4			TAN WH	ITE FINE SA	ND			GPD	
4CS						<u></u>					.400	
											<u> </u>	
WATER BEARING STRATA					······································							
	METHOD		OTHATE WIE	F WATER-BEARING ST	PATA							
MA				ECOVERY RATE				TOTAL ESTIMATE	0 WELL YI	•		
					_							

FOR OSE INTERN	AL USE		WELL RECORD & LOG	(Version 6/9/08)
FILE NUMBER		POD NUMBER	TRN NUMBER	
LOCATION				PAGE 1 OF 2

	•					、 、			•
Ð	TYPE OF	PUMP:] JET CYLINDER	NO FUMP - WELL NOT EQUIPPED			
AMUY CINA	ANNU	T AD	DEPTH	(FT) TO	BORE HOLE DIA. (IN)	MATERIAL TYPE AND SIZE	FY: E AND SIZE AMOUNT (CUBIC FT) AND 3/8 PLUG CEMENT ATERIAL ENCOUNTERED AVITIES OR FRACTURE ZONES) TINY GRAVEL PIECES - VERY FINE SAND CLAY - SAND NE SAND - CLAY NE SAND - CLAY RIBE THE GEOLOGIC LOG OF THE WELL HER - SPECIFY: NG WELL TESTING PERIOD. FT WLEDGE AND BELIEF, THE FOREGOING L FILE THIS WELL RECORD WITH THE SE	METHO	
SEAL	SEAL	AND	114	81	5	6 20/40 SAND		TOPL	OAD
5. SF	GRAVE	PACK.	81	2	5	16 BAGS OF 3/8 PLUG		TOPL	OAD
•			0	2	5	.5 BAGS OF CEMENT		TOPL	OAD
	DEPT	H (FT) TO	THICK (F	•	1	COLOR AND TYPE OF MATERIAL ENCOUNT UDE WATER-BEARING CAVITIES OR FRACTI		WAT BEAR	
	107	110	5		Bf	ROWN FINE SAND - TINY GRAVEL F	ECES	D YES	D NO
	110	112				TAN SILTY CLAY - VERY FINE SA			Ø NO
	112	147	3			RED SILTY CLAY - SAND			
•	147	150		3		TAN - GRAY FINE SAND - CLAY	/		
	TD	150	·		<u>}</u>	TAN- GIVAT FINE SAND- CLA	,	TIYES	
BLI		130	}		+			I YES	
F W	ļ	 		, <u></u>					
. 5		{	+		<u> </u>			TI YES	
CFC									
D GI		<u> </u>			+			<u> </u>	
GEOLOGIC LOG OF WELL		╂────	· · · ·				· ·	THES	
5			<u> </u>		+			Q YES	
		<u> </u>			+				
		┨─────	+		+				
1		┢────	+		+			+=	
1			+					VES VES	
			+		+				
		1			NAL DACES AS N				
=	<u></u>						LOG OF THE WELL		
l ĝ	WEY	L TEST	METHOD:			AIR LIFT OTHER - SPECIFY:			
ADDITIONAL INFO	WEL .	L 1631	TEST RES	ULTS - ATT BLE SHOW	ACH A COPY OF ING DISCHARGE	DATA COLLECTED DURING WELL TESTING, AND DRAWDOWN OVER THE TESTING PERI	INCLUDING START T OD.	ime, end t	TME,
NA I	ADDUTT	NAT TATE	MENTS OR EXT						
È					LL CAVED IN	AT 114 FT TO 150 FT			
8									
TEST									
7.7									
=	THEIT	NDERSIG	NED HERERY	CERTIFIES	THAT TO THE	SEST OF HIS OF HER KNOWLEDGE AND REL		IC A TRUE	
SIGNATURE	CORRI THE PI	CT RECO	RD OF THE A	BOVE DES	CRIBED HOLE AN	DI THAT HE OR SHE WILL FILE THIS WELL R TION OF WELL DRILLING:	ECORD WITH THE ST	ATE ENGIN	IEER AND
26 26			SIGNATU	IRE OF DRI	LLER	DATE			
ļ					······································				

,	FOR OSE INTERNAL USE	WELL RECORD & LOG (Version 6/9/08)						
	FILE NUMBER	POD NUMBER	TRN NUMBER					
	LOCATION			PAGE 2 OF 2				

.

p. 5

5406-

100

Analytical Report 327145

for

Elke Environmental, Inc.

Project Manager: Logan Anderson

Oxy USA Todd Lower San Andres # 8

12-MAR-09





12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX

Florida certification numbers: Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675 Miramar, FL E86349 Norcross(Atlanta), GA E87429

> South Carolina certification numbers: Norcross(Atlanta), GA 98015

> North Carolina certification numbers: Norcross(Atlanta), GA 483

Houston - Dallas - San Antonio - Tampa - Miami - Latin America Midland - Corpus Christi - Atlanta

Page 1 of 8



12-MAR-09



Project Manager: Logan Anderson Elke Environmental, Inc. 4817 Andrews Hwy P.O. Box 14167 Odessa, tx 79768 Odessa, TX 79762

Reference: XENCO Report No: 327145 Oxy USA Project Address:

Logan Anderson:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 327145. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 327145 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully.

Brent Barron, II Odessa Laboratory Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994. Certified and approved by numerous States and Agencies. A Small Business and Minority Status Company that delivers SERVICE and QUALITY Houston - Dallas - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America

Laboratories
and all the second second second

Sample Cross Reference 327145

Matrix

w



Lab Sample Id

327145-001

Elke Environmental, Inc., Odessa, TX

Oxy USA

Date Collected

Mar-10-09 12:43

Sample Depth

109.03 - 116.21 ft

Sample Id

MW-1



Project Location:

Certificate of Analysis Summary 327145

Elke Environmental, Inc., Odessa, TX Project Name: Oxy USA



Project Id: Todd Lower San Andres # 8

Contact: Logan Anderson

Date Received in Lab:	Wed Mar-11-09 01:00 pm
-----------------------	------------------------

Report Date: 12-MAR-09

Project Manager: Brent Barron, II

	Lab Id:	327145-001			
Analysis Requested	Field Id:	MW-1			
Analysis Kequestea	Depth:	109.03-116.21 ft			
	Matrix:	WATER			
	Sampled:	Mar-10-09 12:43			
TDS by SM2540C	Extracted:				
	Analyzed:	Mar-11-09 15:30			
	Units/RL:	mg/L RL			
Total dissolved solids		516 5.00			

. . . .

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount involved for this work order unless otherwise agreed to in writing.

Since 1990 Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America - Atlanta - Corpus Christi

Brent Barron

Odessa Laboratory Director





- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the MQL and above the SQL.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- * Outside XENCO's scope of NELAC Accreditation.

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994. Certified and approved by numerous States and Agencies. A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - San Antonio - Corpus Christi - Midland/Odessa - Tampa - Miami - Latin America

	Phone	Fax
4143 Greenbriar Dr, Stafford, Tx 77477	(281) 240-4200	(281) 240-4280
9701 Harry Hines Blvd, Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116



Sample Duplicate Recovery



Project Name: Oxy USA

Work Order #: 327145

Lab Batch #: 752276 Date Analyzed: 03/11/2009 QC- Sample ID: 327145-001 D	Date Prepared: Batch #:	03/11/2009 1	Anały	m: Todd Lo yst: LATCO rix: Water		udres # 8
Reporting Units: mg/L	SAMP	LE / SAMPI	E DUPLIC	CATE REC	OVERY]
TDS by SM2540C	Parent Sa Resul		e RPD	Control Limits %RPD	Flag	
Analyte	[A]	[B]		/0KFD		
Total dissolved solids	516	558	8	30		1

Spike Relative Difference RPD 200 * | (B-A)/(B+A) | All Results are based on MDL and validated for QC purposes.

E1 ^×**	vironmen 100 Laboratorias Compa		۰,	35		· · · ·			2600 W Ideese,	oot i-s	IO End	ŧ .	vŝtop	Y RE	CORD	ANL	Ph	ione: ext:	432-50 432-50	63-160 63-171	ю		
	Project Managar	Logan Anderson		·····		3 <u>2</u> }								- (ct Nam		<u>0</u> 2	ý	0	<u>5A</u>			
	Company Name	Elke Environmer			·			<u>````</u>	****						rojacti	_	-1	$\frac{1}{T}$	1			hore	
	Company Address City/State/Zio:	Odessa, TX 797	 20'	_	<u>,</u> 7.								-	Pro			.00	6	wer		<u>~ //</u>	nøre	٤
		432-366-0043	7					- जन्म 400	368-0						PO					TRRF		D NPD	
,	Telephone No: Sempler Signature	TP	D			- Fext		-	71	· ·				port P	oçmat:	751	Standa	нq	U	TROOLE	' 1	LI NPD	ÆS
(ALL)	dempler algmature					9-11	Q11.	10.0	keen	- Q44	al 100.	<u></u>		F	·	_		Noithe					1
. ľ	er#: 327	145		,	, ,			ť	Preserve	-		<u></u>	1 Mat		1 1	- 10	CLP:	++					12
Ali # (tab use criti)		.0 <u>CODE</u>	And Deal	gida Capto	Dete Sampled			task d'Contenn ta		181	Mu.S.O.	Mons.	And Andrew Succession	Phil and an arrival	IPH: TA 1905 TA 1906	Antonia (Cl. SON, All Markey	URIERFICEC Mark A AUBICICY PHD B		AND	ACI. Korki	7.05		RUSH TAT PRIMAL AV
্র	mw-1		109.0	16.21	310 09	12:43	2	ĪΧ					Gu	5		Ť		ff	Ť	ĒĒ	İX	ŤÞ	Ŕ
	· · ·	,	0,	, I	2 and 1	1. 18	4) 14	$\frac{1}{2}$	(Δ)	\Box	4					•		Π	\Box	\square	Π	II	
					<u>;</u>			11	$\Gamma \ge$		<u>.</u>	÷.,	·	_	1.			Ц		Ĺ	Ш		
			- <u> </u>	┝╼╍┾		4 7 4 1 1			<u> </u>	\square	-	Ľ	·	-	<u> </u>	11	Ļ	₩	44	<u> </u>	₊	44	4
			-	┝╍┼	······	 	4		H	++	+			+	++	\mathbb{H}	+	H	44		H	+	4
<u> </u>	·		+	┝─╋		+		é	+				1-	+		H	, t h	籵	++	÷÷-	H	┿╊	+
<u> </u>						<u> </u>	+	+	H	††		+	1	1	\mathbf{H}	H	+	H	++	i ti	十	++	4
		· · · · · · · · · · · · · · · · · · ·								Ħ		Ť			tt	†		H	\mathbf{H}	1.	5	+1	1
						·	1.1	1		ſ.,	П	ŀ		1		Π		CT.	T		Π	TL	T
Speck	l instructions:	-	•	1											80	borat mple	ory Co Contain ros of I	nons in	tai: tai:		G) N	i.
Raina	and the second	1 Date		ne jR	epetied light	De				<u>.</u>	<u>,</u>			Tim		ice Fi bels o	ton of 1 In contr	leadap Mnoile	10017				Ð
	- CC	3-11-209	11:4		the		ж.,	<u>.</u>	~~~ `````	1.1			1-09	11:9	540	stody stody	n conta secia c secia c	20 000 ni 20 000 ni	ziner(t ar(s)	s)	đ X		Þ
I FOR BOARD	shed by /////	3-/1-09	10	NF	actived by:						- G - 1	ס	ate 🖉	THE	e ~ 5e	mone I	Hand C amplent ounler?	ARVE!	1		- 'QL	Ś N	

.

•

. • Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Elke Env. Client. 3.11.09 13.00 Date/ Time: 327149 Lab ID # ar Initials

1

Sample Receipt Checklist

1 Temperature of container/ cooler?	Clee?	No	Client Initials
	(Yes	No	<u> </u>
#3 Custody Seals Intact on shipping container/ cooler?	Yes	No	Not Present.
44 Custody Seals intact on sample bottles/ container?	(es)	No	Not Present
#5 Chain of Custody present?	<u>(Tês)</u>	No	
#6 Sample instructions complete of Chain of Custody?	Nes	No	
#7 Chain of Custody signed when relinquished/ received?	(es)	No	
#8 Chain of Custody agrees with sample label(s)?	(res)	No	ID written on Cont / Lid
#9 Container label(s) legible and intact?	000	No	Not Applicable
#10 Sample matrix/ properties agree with Chain of Custody		No	14 N K
#11 Containers supplied by ELOT?	(Yes)	No	
#12 Samples in proper container/ bottle?	(Yes	No.	See Below
#13 Samples property preserved?	Yes	No	See Below
#14 Sample bottles intact?	Yes	No	
#15 Preservations documented on Chain of Custody?	Yes	No	
#16 Containers documented on Chain of Custody?	(Yes)	No	
#17 Sufficient sample amount for indicated test(s)?	Ves	No	See Below
#18. All samples received within sufficient hold time?	Yes	No	See Below
#19 Subcontract of sample(s)?	Yes	No	Not Applicable
#20 VOC samples have zero headspace?	Yes	No	Not Applicable
Variance De	ocumentation		
Contact: Contacted by:		-	Date/ Time:
Regarding.		~	

Corrective Action Taken

Check all that Apply.

See attached e-mail/ fax

Client understands and would like to proceed with analysis Cooling process had begun shortly after sampling event

a set and a set a





12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX

Florida certification numbers: Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675 Norcross(Atlanta), GA E87429

> South Carolina certification numbers: Norcross(Atlanta), GA 98015

> North Carolina certification numbers: Norcross(Atlanta), GA 483

Houston - Dallas - San Antonio - Tampa - Miami - Latin America Midland - Corpus Christi - Atlanta

Page 1 of 14

Analytical Report 324728

for

Elke Environmental, Inc.

Project Manager: Logan Anderson

Oxy USA Todd Lower San Andres # 8

17-FEB-09





17-FEB-09



Project Manager: Logan Anderson Elke Environmental, Inc. 4817 Andrews Hwy P.O. Box 14167 Odessa, tx 79768 Odessa, TX 79762

Reference: XENCO Report No: 324728 Oxy USA Project Address:

Logan Anderson:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 324728. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 324728 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II Odessa Laboratory Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994. Certified and approved by numerous States and Agencies. A Small Business and Minority Status Company that delivers SERVICE and QUALITY Houston - Dallas - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America



Sample Cross Reference 324728



Elke Environmental, Inc., Odessa, TX

Oxy USA

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
TP 1 @ 25'	S	Feb-10-09 12:25	25 ft	324728-001
TP 2 @ 70'	S	Feb-10-09 15:45	70 ft	324728-002
TP 3 @ 35'	S	Feb-10-09 13:19	35 ft	324728-003
TP 4 @ 25'	S	Feb-10-09 11:45	25 ft	324728-004
TP 5 @ 70'	S	Feb-10-09 11:05	70 ft	324728-005



Certificate of Analysis Summary 324728

Elke Environmental, Inc., Odessa, TX Project Name: Oxy USA



Project Id: Todd Lower San Andres # 8

Contact: Logan Anderson

Project Location:

Date Received in Lab: Wed Feb-11-09 03:15 pm

Report Date: 17-FEB-09

								Project Ma	nager:	Brent Barron,	II	
	Lab Id:	324728-0	001	324728-0	02	324728-0	003	324728-0	04	324728-0	005	
Analysis Degrated	Field Id:	TP 1 @ 1	25'	TP 2 @	70' ·	TP 3 @ 3	35'	TP 4 @ 2	25'	TP 5 @	70'	ĺ
Analysis Requested	Depth:	25 ft		70 ft		35 ft		25 ft		70 ft		
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		
	Sampled:	Feb-10-09	Feb-10-09 12:25		15:45	Feb-10-09	13:19	Feb-10-09	11:45	Feb-10-09	11:05	
Anions by EPA 300	Extracted:											
	Analyzed:	Feb-14-09	14:17	Feb-14-09	14:17	Feb-14-09	14:17	Feb-14-09	4:17	Feb-14-09	14:17	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
Chloride		42.3	5.10	40.3	5.06	37.3	5.16	58.3	5.09	35.1	5.09	
Percent Moisture	Extracted:											
	Analyzed:	Feb-11-09 17:00		Feb-11-09	17:00	Feb-11-09 17:00		Feb-11-09 17:00		Feb-11-09 17:00		
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	
Percent Moisture		1.96	1.00	1.20	1.00	3.03	1.00	1.83	1.00	1.73	1.00	
TPH By SW8015 Mod	Extracted:	Feb-12-09	19:19	Feb-12-09	19:19	Feb-12-09	19:19	Feb-12-09	9 :19	Feb-12-09	19:19	
	Analyzed:	Feb-13-09	09:51	Feb-13-09	10:16	Feb-13-09	10:40	Feb-13-09	1:04	Feb-13-09 11:28		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
C6-C12 Gasoline Range Hydrocarbons		ND	15.3	ND	15.2	ND	15.5	ND	15.3	ND	15.3	
C12-C28 Diesel Range Hydrocarbons		22.8	15.3	78.0	15.2	ND	15.5	ND	15.3	15.8	15.3	
C28-C35 Oil Range Hydrocarbons		ND	15.3	ND	15.2	ND	15.5	ND	15.3	ND	15.3	
Total TPH		22.8	15.3	78	15.2	ND	15.5	ND	15.3	15.8	15.3	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no avaranty to the end use of the data hereby presented. Our liability is limited to the amount involved for this work order unless otherwise agreed to in writing.

Since 1990 Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America - Atlanta - Corpus Christi

Brent Barron

Odessa Laboratory Director





- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the MQL and above the SQL.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- * Outside XENCO's scope of NELAC Accreditation.

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994. Certified and approved by numerous States and Agencies. A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - San Antonio - Corpus Christi - Midland/Odessa - Tampa - Miami - Latin America

	Phone	Fax
4143 Greenbriar Dr, Stafford, Tx 77477	(281) 240-4200	(281) 240-4280
9701 Harry Hines Blvd, Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116



Form 2 - Surrogate Recoveries

Project Name: Oxy USA

Vork Orders : 324728,		Project II): Todd Low	er San Andı	res # 8
Lab Batch #: 749564 Sample: 324701-0			x: Soil		
Units: mg/kg	SU.	RROGATE RI	COVERY S	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	125	100	125	70-135	
o-Terphenyl	55.8	50.0	112	70-135	
Lab Batch #: 749564 Sample: 324701-0	009 SD / MSD Bat	tch: 1 Matri	ix: Soil		
Units: mg/kg	SU	RROGATE R	COVERY S	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	123	100	123	70-135	
o-Terphenyl	54.7	50.0	109	70-135	
Lab Batch #: 749564 Sample: 324728-0	001/SMP Ba	tch: 1 Matr	ix: Soil	·	
Units: mg/kg		RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terpheny]	57.2	50.0	114	70-135	
Lab Batch #: 749564 Sample: 324728-6	002 / SMP Ba	tch: 1 Matr	ix: Soìl	1	
Units: mg/kg		RROGATE R		STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	57.0	50.0	114	70-135	
Lab Batch #: 749564 Sample: 324728-	003 / SMP Ba	tch: 1 Matr	ix: Soil		
Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
		1			1
1-Chlorooctane	104	100	104	70-135	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution Surrogate Recovery [D] = 100 * A / B All results are based on MDL and validated for QC purposes.



Form 2 - Surrogate Recoveries

Project Name: Oxy USA

Vork Orders : 324728,		Project II	: Todd Low	er San And	res # 8
Lab Batch #: 749564 Sample: 324728-004	/ SMP Bat	tch: 1 Matri	x: Soil		
Units: mg/kg	SUI	RROGATE RE	COVERY S	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	57.7	50.0	115	70-135	
Lab Batch #: 749564 Sample: 324728-005	/ SMP Bat	tch: 1 Matri	x: Soil		
Units: mg/kg	SU	RROGATE RE	COVERY S	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	58.8	50,0	118	70-135	
Lab Batch #: 749564 Sample: 524748-1-B	KS/BKS Bat	tch: 1 Matri	ix: Solid		
Units: mg/kg	SU	RROGATE RI	COVERY	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	120	100	120	70-135	
o-Terphenyl	52.7	50.0	105	70-135	
Lab Batch #: 749564 Sample: 524748-1-B	LK/BLK Bat	tch: 1 Matri	ix: Solid		
Units: mg/kg	SU	RROGATE RI	ECOVERY S	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	the second se	·····	117	70-135	
	56.3	50.0	113	/0-135	
Lab Batch #: 749564 Sample: 524748-1-B		[ix: Solid	/0-135	
Lab Batch #: 749564 Sample: 524748-1-B Units: mg/kg	SD / BSD Bat	[ix: Solid	L	
-	SD / BSD Bat	tch: 1 Matri	ix: Solid	L	Flags
Units: mg/kg TPH By SW8015 Mod	SD / BSD Bai SU Amount Found	tch: 1 Matri RROGATE RI True Amount	ix: Solid ECOVERY Recovery %R	STUDY Control Limits	Flags

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery $[D] \approx 100 * A / B$ All results are based on MDL and validated for QC purposes.





Project Name: Oxy USA

Work Order #: 324728		F	Project ID:	Todd Lo	wer San Aı	ndres # 8
Lab Batch #: 749692	Sample: 749692-	1-BKS	Matr	ix: Solid		
Date Analyzed: 02/14/2009	Date Prepared: 02/14/2009 Analyst: LATCOR				OR	
Reporting Units: mg/kg	Batch #: 1	BLANK	/BLANK SPI	KE REC	OVERY	STUDY
Anions by EPA 300	Blank Result	Spike Added	Blank Spike	Blank Spike	Control Limits	Flags
Analytes	[A]	[B]	Result [C]	%R [D]	%R	
Chloride	ND	10.0	10.9	109	90-110	

Blank Spike Recovery [D] = 100*[C]/[B] All results are based on MDL and validated for QC purposes.

Page 8 of 14



:

BS / BSD Recoveries



Project Name: Oxy USA

Work Order #: 324728 Analyst: BHW Lab Batch ID: 749564	Sample: 524748-1-BK		-	red: 02/12/200	9			Date A		Todd Lower 02/13/2009 Solid	San Andı	es # 8:
Units: mg/kg	Γ		BLAN	K/BLANK S	SPIKE / I	BLANK S	PIKE DUPI	JCATE 1	RECOV	ERY STUD	Y	
TPH By SW80	15 Mod	Blank ample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes			[B]	[C]	[D]	[E]	Result [F]	[G]				
C6-C12 Gasoline Range Hydroc	arbons	ND	1000	1150	115	1000	1160	116	1	70-135	35	
C12-C28 Diesel Range Hydrocar	rbons	ND	1000	1070	107	1000	1060	106	1	70-135	35	

Relative Percent Difference RPD = $200^{*}|(C-F)/(C+F)|$ Blank Spike Recovery [D] = $100^{*}(C)/[B]$ Blank Spike Duplicate Recovery [G] = $100^{*}(F)/[E]$ All results are based on MDL and Validated for QC Purposes

Form:	3 - MS I	Recover	ies)		ACC DADA
Laboratorics Project Name: (Dxy USA					
Work Order #: 324728			-	• • • • F D	Todd I own	r San Andres #
Lab Batch #: 749692			Pr	oject ID:	TOUG LOWE	r San Andres #
Date Analyzed: 02/14/2009 Da	te Prepared:	02/14/2009		Analyst:	LATCOR	
QC- Sample ID: 324701-061 S	Batch #:	1 ·		Matrix:	Soil	
Reporting Units: mg/kg	MAT	RIX / MA	FRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by EPA 300	Parent Sample Result	Spike Added	Spiked Sample Result [C]	%R {D]	Control Limits %R	Flag
Analytes	[A]	(B)				
Chloride	17300	4690	11500	0	80-120	x

Matrix Spike Percent Recovery $[D] = 100^{\circ}(C-A)/B$ Relative Percent Difference $[E] = 200^{\circ}(C-A)/(C+B)$ All Results are based on MDL and Validated for QC Purposes

.

-

a the second of the second second second
88 2
A A A F A A
is the many with the time of the state
A COMPANY AND A COMPANY AND A COMPANY
1. 网络小白花 化二乙酸 网络加速度

Form 3 - MS / MSD Recoveries

Project Name: Oxy USA



Work Order #: 324728

Project ID: Todd Lower San Andres # 8

Lab Batch ID: 749564 Date Analyzed: 02/13/2009 Reporting Units: mg/kg	QC- Sample ID: Date Prepared:	02/12/2	009	An		1 Matri BHW KE DUPLICA	k: Soil TE REC	OVERY	STUDY		
TPH By SW8015 Mod	Parent Sample	Spike	Spiked Sample Result	Spiked Sample		Duplicate Spiked Sample		RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
C6-C12 Gasoline Range Hydrocarbons	ND	1110	1250	113	1110	1230	111	2	70-135.	35	
C12-C28 Diesel Range Hydrocarbons	ND	1110	1180	106	1110	1160	105	2	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/BRelative Percent Difference RPD = 200*[(C-F)/(C+F)] Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

4



Work Order #: 324728



.

Project Name: Oxy USA

Lab Batch #: 749692			Project I	D: Todd Lo	wer San Ar
Date Analyzed: 02/14/2009	Date Prepared: 02/	14/2009	Analy	st: LATCOF	٤ ٤
QC- Sample ID: 324701-061 D	Batch #:	1	' Matr	ix: Soil	
Reporting Units: mg/kg	SAMPLE	/SAMPLE	DUPLIC	ATE REC	OVERY
Anions by EPA 300	Parent Sample Result [A]	e Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		(B)	}		
Chloride	17300	18200	5	20	
Lab Batch #: 749332					
Date Analyzed: 02/11/2009	Date Prepared: 02/	11/2009	Analy	st: BEV	
QC- Sample ID: 324687-010 D	Batch #:	1	Matr	ix: Soil	
Reporting Units: %	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture	Parent Sample Result [A]	e Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte	[14]	[B]		,	
Percent Moisture	8.59	7.24	17	20	1

Spike Relative Difference RPD 200 * | (B-A)/(B+A) | All Results are based on MDL and validated for QC purposes.

Odessa, Texas 75765	Phone: 433-483-4800 Fax: 433-583-4713
······	Project Name: Oxy USA
	Project & Todd Lower Son Andres # 2
	Projection Todd Lover San Andres # 8
	POS
Carble: 419.388.6884	Recort Formula Standard D TRRP D NPDE8
	Assistan For:
Promotion & Ed Continues	
The Sampled Attended Attende Attended Attended A	reveal grants reveal grants reveal and reveal reveal and reveal r
2,250 11	
3:45P 1X	K
يطبيها مطرب واستكرت والتكري والمتكر والمتكر والمتكر والمتكر	
	5 2
╾╾╁╊╉┾┊┼┽╎┽╊	╋╾╴╋╫┼╋╊┟╇┼┼╋┿╋╋╊
	Laboratory Convention Bengin Contistens Intent?
	Bengta Contributers Intent? V N WOD France of Headspoord? V H Labels on constraint(s) V H Catalog seals on constraint(s) V H Seal 1779 Bangto Hand Dathered V H W MontentClard Res, 7 V H
	Sale Tine Lobais on containan(1) N Cristody wale on containan(1) N Cristody wale on containan(1) N Cristody wale on containan(1) Y Sale Time Borgie Hand Datharad X
	New Third Bit Counter Life Off
a trans	The Holds in Honder
	: 45 P P P X : 19 P 11 X : 19 F 11 X : 19 S A 11 X : 10 S A 11

.

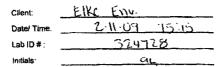
Page 13 of 14

.

.

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In



Sample Receipt Checklist

	outline (coupt	onociaiat		
#1	Temperature of container/ cooler?	(as)	No	Client Initia
_	Shipping container in good condition?	Cas	No	
	Custody Seals intact on shipping container/ cooler?	Yes	No	< Not Present
	Custody Seals intact on sample bottles/ container?	Yes	No	Not Present
	Chain of Custody present?	(es)	No	
#6	Sample instructions complete of Chain of Custody?	(Yes)	No	
#7	Chain of Custody signed when relinquished/ received?	Yes	No	
#8	Chain of Custody agrees with sample tabel(s)?	Yes	No	ID written on Cont/Lid
#9	Container label(s) legible and intact?	Kes	No	Not Applicable
#10	Sample matrix properties agree with Chain of Custody?	Yes	No	1
#11	Containers supplied by ELOT?	Yes	No	
#12	Samples in proper container/ bottle?	Yes	No	See Betow
#13	Samples properly preservad?	Yes	No	See Below
#14	Sample bottles intact?	(es	No	
#15	Preservations documented on Chain of Custody?	Yes	No	1
#16	Containers documented on Chain of Custody?	Ves?	No	1
#17	Sufficient sample amount for indicated test(s)?	Yes	No	See Below
#18	All samples received within sufficient hold time?	Yes	No	See Below
#19	Subcontract of sample(s)?	Yes	No	< Not Applicable
#20	VOC samples have zero headspace?	Mas	No	Not Applicable

Variance Documentation

Contact: Contacted by: Date/ Time:

Regarding:

,-

Corrective Action Taken:

Check all that Apply:

See attached e-mail/ fax

Client understands and would like to proceed with analysis Cooling process had begun shortly after sampling event